

becoming much excited and complaining constantly of the breasts. The secretion of milk was not very abundant. Finally fever developed, although the infant remained remarkably undisturbed. Thyroid extract was given the mother in full doses when her symptoms disappeared and mother and child did well. This is in keeping with the remark of the writer that the endocrine glands are responsible for many conditions pertaining to lactation.

GYNECOLOGY

UNDER THE CHARGE OF

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Disagreeable Sequelæ from Radium Treatment.—GRAVES (*New York Med. Jour.*, 1920, cxi, 969) recounts certain disagreeable sequelæ from intra-uterine radiation which, though mentioned by several writers, received minor attention or have been lost sight of in the reports of brilliant end-results. Some of these symptoms are significant chiefly from the psychological influence which they may exert on the patient, but even these may be of considerable import to the patient's general welfare. First among the specific symptoms from an intra-uterine application of radium must be mentioned nausea and Graves calls attention to our statement that "nausea and vomiting are the exception rather than the rule after radiation." His own experience has been rather the reverse for he finds that the majority of patients suffer more nausea than would be expected after a simple ether examination and curettage, in which the length of anesthesia would be approximately the same. That the nausea is due to something more than the simple effect of the anesthetic is often strikingly evident by the almost immediate relief that follows the removal of the radium in certain cases. In other cases the nausea has been persistent, with greater or less intensity, for a period much longer than is seen in even unfavorable cases after a short anesthesia, where radium has not been used. In some cases there is little or no nausea after radiation, but in his experience these cases are the exception, whereas after a simple curetting they are the rule. In one of his patients violent nausea and vomiting persisted for seven days after a mild dose. The patient, a strong young woman of twenty-seven, was neurotic and apprehensive, but the severity of the symptoms could not be explained wholly by her mental attitude, nor by the small amount of ether administered at the operation. A second important after-result of the radium treatment is a possible continuation or reappearance of the bleeding, for the cure of which the operation was

undertaken. Such bleeding may appear within a few hours after the removal of the radium, and may persist for days or sometimes weeks, with varying degrees of intensity and constancy, before permanent cessation takes place. The amount of blood lost varies from a steady profuse flow to an occasional scanty showing, and the time of its appearance may extend from two or three days to five or six weeks. To a nervous, apprehensive woman, not premonished of this possible event, and confidently expectant of an instantaneous cure, the continuation of symptoms comes as an alarming shock, and the attendant who has neglected to forewarn his patient finds it extremely difficult to explain conditions. In some cases, in patients treated for menorrhagia, the next one or two periods may show no diminution, and sometimes even an increase of the catamenial flow. Here again the attendant who has not cautioned his patient finds himself in an embarrassing predicament in his perfectly truthful assurance that the ultimate result will probably be entirely satisfactory. A third specific after-effect of intra-uterine radiation is leucorrhea. In cases of recurrent bleeding it seems to appear as the end-result of the flow in the form of a thin watery discharge of a pinkish hue which gradually fades to a pale brown or colorless character. In cases where the radium application has caused a complete cessation of bleeding the same watery discharge usually ensues for a varying length of time, lasting from a few days to several weeks or months. Some patients do not notice it at all but they are in the minority. It has been a matter of rather frequent personal observation that this characteristic radium leucorrhea appears periodically for several months at the usual menstrual time and seems to indicate an effort on the part of Nature to reestablish the menstrual rhythm. The discharge is chemically irritating and if not properly treated by cleansing douches becomes foul and may set up an annoying vaginitis, as has occurred in more than one of his cases. Pelvic pain has been described by some as one of the typical symptoms following the radium treatment. There are occasional complaints on the part of patients of a slight nagging pain in the side, usually on the left, which has subsided in a few days and gives no further trouble. In a small number of cases patients suffer pain of a nature of a uterine colic during the time of the radium application, the result apparently of a reaction on the part of the uterus to a foreign body within its cavity. In a few other cases, however, the pain experienced during the immediate convalescence proved to be the forerunner of later very serious inflammatory consequences. In the light therefore of present experience, Graves is convinced that in the properly selected cases there should be no adnexal pain and that if it does occur, it must be regarded as a danger signal of grave import. Too great emphasis cannot be laid on the danger of making intra-uterine radium applications in the presence of pelvic inflammation. Even though the active inflammatory process existed years before and there remain only a few peritoneal adhesions radiation is attended with risk. Inasmuch as an old inflammatory process is sometimes missed both in the history and the most expert preliminary examination, it stands to reason that even with great care occasional results are sure to be encountered and anyone who says that the intra-uterine application of radium for bleeding is attended with no danger knows little whereof he speaks. The injurious influence of radium on chronic inflammatory

pelvic conditions, is perhaps the most important reason why in the extensive clinical use to which radium is destined very soon to be put, its employment, in gynecological practise at least should be limited to responsible and well trained operators. Some mention has been made in the literature of a reaction on the part of the kidneys to radiation. Graves has had an opportunity of observing in another clinic, the onset of an acute nephritis following an intrauterine treatment, in the case of an elderly woman who had a cardiorenal history. He has collected no specific data on this point in his series of cases, nor has he seen any systematic report throwing light on this subject. Nevertheless, there is sporadic evidence that caution should be exercised in treating cases with renal disease. Nervous symptoms following radiation are of peculiar interest. If the menses are inhibited, hot flushes are common but not constant. They occur in about the same proportion as after hysterectomy with or without the ablation of the ovaries. Some think they are less intense and annoying, others think they are more so. In his experience he cannot see that there is any marked difference one way or the other. They seem to follow the same law as after radical operations in that they are intensified by complicating discomforts and temporary disappointment over the result of the treatment. The influence of the ovarian secretion is strikingly illustrated in cases where, after a period of amenorrhea, the menses are reëstablished with a complete synchronous disappearance of hot flushes. As after hysterectomy, the hot flushes when present are usually amenable to ovarian therapy, preferably in the form of the residue or the whole extract. The various points brought out in this article are presented not for the purpose of depreciating the great value of radium in the treatment of non-malignant uterine hemorrhage, but rather to warn those who have not yet used it for this purpose that the immediate convalescence from a given treatment is by no means always a bed of roses.

OPHTHALMOLOGY

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Action of Hypophysin (Pituitrin) Upon the Pupil of the Rabbit.—POLLECK (*British Jour. Ophthal.*, March, 1920, p. 106) finds that hypophysin (pituitrin), when instilled into the eye of the rabbit, produces a mydriasis in about 94 per cent. of the experiments, although it is necessary in some cases to repeat the instillations several times. The effect is increased by decentralization (*i. e.*, cutting the sympathetic in the neck below the superior cervical ganglion) and still more by